

## COPPER ALLOY FOR LEAD MATERIAL OF SEMICONDUCTOR DEVICE

Patent Number: **JP58124254**  
Publication date: **1983-07-23**  
Inventor(s): **TSUJI MASAHIRO; others: 01**  
Applicant(s): **NIPPON KOGYO KK**  
Requested Patent:  **JP58124254**  
Application Number: **JP19820006061 19820120**  
Priority Number(s):  
IPC Classification: **H01L23/48 ; C22C9/00**  
EC Classification:  
Equivalents: **JP1549371C, JP63014056B**

---

### Abstract

---

**PURPOSE:** To improve all heat dissipating property, heat resistance, strength, solderability, plating bondability required for a lead material.

**CONSTITUTION:** 0.001-2.0wt% of total amount of one or more selected from a group which consists of 0.001-0.1wt%, 0.001-0.1wt% of As, 0.001-0.1wt% of Sb, 0.01-1.0wt% of Fe, 0.01-1.0wt% of Co, 0.01-1.0wt% of Cr, 0.01-1.0wt% of Sn 0.01-1.0wt% of Al, 0.01-1.0wt% of Ti, 0.01-10.0wt% of Zr, 0.01-1.0wt% of Mg, 0.01-1.0wt% of Be, 0.01-1.0wt% of Mn and 0.01-1.0wt% of Zn is added as sub content to an alloy which contains 0.4-4.0wt% of Ni, 0.1-1.0wt% of Si and the residue of copper and unavoidable impurities. When the Si content exceeds 1.0wt%, the workability and the conductivity are remarkably reduced, and the solderability is reduced. Further, when the total amount of the sub content is less than 0.001wt%, an alloy having high strength and corrosion resistance cannot be obtained.

Data supplied from the **esp@cenet** database - i2